AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Original) A method of determining total urokinase concentration in a sample containing either or both active and inactive forms of urokinase, comprising:

obtaining a first peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135;

obtaining a second peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 159 and 411;

obtaining a third peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159;

obtaining an immunological composition directed against each of said peptides;

contacting aliquots of said sample with each of said immunological compositions; and,

determining the quantity of each of said immunological compositions which is bound to at least one of said forms of urokinase in each of said aliquots.

2. (Original) The method of claim 1 wherein said first peptide is one as in any of Seq. ID Nos. 1-6.

3. (Original) The method of claim 1 wherein said second peptide is one as in any of Seq. ID Nos. 7-12.

4. (Original) The method of claim 1 wherein said third peptide is one as in any of Seq. ID No. 13-14.

5. (Original) The method of claim 1 wherein each of said immunological compositions has a binding affinity constant for said peptide from which it is derived that is substantially higher than its binding affinity constant for a non-urokinase protein as similar in amino acid sequence to urokinase as is trypsin.

6. (Original) The method of claim 1 wherein said third peptide is one as in Seq. ID No. 14, and is used to derive an immunological composition which exhibits a binding affinity constant for urokinase zymogen of at least $1 \times 10^8\ M^{-1}$, and a binding affinity constant for forms of urokinase lacking a peptide bond between amino acid residues 158 and 159 of Seq. ID No. 16 of at least approximately 10-fold lower than that for urokinase zymogen.

7. (Original) The method of claim 1 wherein an additional peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 135 and 136 is obtained and used to derive said immunological composition.

8. (Original) The method of claim 7 wherein said additional peptide is that of Seq. ID No. 17.

9. (Original) The method of claim 1 wherein the immunological composition is an antiserum, an antibody, a hybridoma, or a supernatant of a hybridoma, obtained via injection into a mammal of said peptide.

10. (Original) The method of claim 1 wherein said determination of said quantity of each of said immunological compositions is carried out by radiolabeling said sample or said immunological composition.

11. (Original) The method of claim 1 wherein said determination of said quantity of each of said immunological compositions is carried out by:

determining the amount of low molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 159 and 411, but which does not bind to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135;

determining the amount of high molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135 or between amino acid residues 159 and 411, but which does not bind to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159; and,

determining the amount of urokinase zymogen in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159.

12. (Original) The method of claim 1 wherein said determination of said quantity of each of said immunological compositions is carried out by:

determining the amount of low molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 159 and 411, but which does not bind to one or more of said immunological compositions directed against a peptide corresponding to Seq. ID No. 17;

determining the amount of high molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135 or between amino acid residues 159 and 411, but which does not bind to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159; and,

determining the amount of urokinase zymogen in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159.

13. (Original) A method of determining total urokinase concentration in a sample containing either or both active and inactive forms of urokinase, comprising:

obtaining a peptide as in any of Seq. ID Nos. 1-6;

obtaining a peptide as in any of Seq. ID Nos. 7-12;

obtaining a peptide as in any of Seq. ID No. 13-14;

obtaining an immunological composition selected from the group of immunological compositions consisting of an antisera, an antibody, a hybridoma, or a supernatant of a hybridoma, said immunological compositions each obtained via injection into a mammal of said peptide;

contacting aliquots of said sample with each of said immunological compositions; and,

determining the quantity of each of said immunological compositions which is bound to at least one of said forms of urokinase in each of said aliquots, wherein said determination of the quantity of each of said immunological compositions is carried out by:

determining the amount of low molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 159 and 411, but which does not bind to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135;

determining the amount of high molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135 or between amino acid residues 159 and 411, but which does not bind to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159; and,

determining the amount of urokinase zymogen in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159.

14. (Original) A kit for determining total urokinase concentration in a sample containing either or both active and inactive forms of urokinase, comprising:

immunological compositions, selected from the group of immunological compositions consisting of an antisera, an antibody, a hybridoma, or a supernatant of a hybridoma;

said immunological compositions each obtained via injection into a mammal of a peptide directed against each of a set of peptides including: a first peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135, a second peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 159 and 411, and a third peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159; and,

instructions for contacting aliquots of said sample with each of said immunological compositions, and determining the quantity of each of said immunological compositions which is bound to at least one of said forms of urokinase in each of said aliquots.

15. (Original) The kit of claim 14 wherein said first peptide is one as in any of Seq. ID Nos. 1-6.

16. (Original) The kit of claim 14 wherein said second peptide is one as in any of Seq. ID Nos. 7-12.

17. (Original) The kit of claim 14 wherein said third peptide is one as in any of Seq. ID No. 13-14.

18. (Original) The kit of claim 14 wherein an additional peptide corresponding to a sequence in Seq. ID No. 15 which includes amino acid residues 135 and 136 is obtained and used to derive said immunological composition.

19. (Original) The kit of claim 18 wherein said additional comprises Seq. ID No. 17.

20. (Original) The kit of claim 14 wherein the immunological composition is an antiserum, an antibody, a hybridoma, or a supernatant of a hybridoma, obtained via injection into a mammal of said peptide.

21. (Original) A kit for determining total urokinase concentration in a sample containing either or both of active and inactive forms of urokinase, comprising:

immunological compositions directed against each of a set of peptides including: a first peptide as in any of Seq. ID Nos. 1-6, a second peptide as in any of Seq. ID Nos. 7-12, and a third peptide as in any of Seq. ID No. 13-14; and,

instructions for contacting separate aliquots of said sample with each of said immunological compositions, and determining the quantity of each of said immunological compositions which is bound to at least one of said forms of urokinase in each of said aliquots, wherein said instruction direct the user to:

determine the amount of low molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 159 and 411, but which does not bind to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135;

determine the amount of high molecular weight urokinase in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 between amino acid residues 1 and 135 or between amino acid residues 159 and 411, but which does not bind to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159; and,

determine the amount of urokinase zymogen in said sample which binds to one or more of said immunological compositions directed against said peptide corresponding to a sequence in Seq. ID No. 16 which includes amino acid residues 158 and 159.

22. (Withdrawn) A peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.

23. (Withdrawn) An antisera obtained via injection into a mammal of a peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.

24. (Withdrawn) An antibody obtained via injection into a mammal of a peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.

25. (Withdrawn) A hybridoma producing an antibody obtained via injection into a mammal of a peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.

26. (Withdrawn) A supernatant of a hybridoma producing an antibody obtained via injection into a mammal of a peptide for determining total urokinase concentration in a sample as in any of Seq. ID Nos. 1-15 and 17.